VERMONT

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Agency of Agriculture Food & Markets

Vermont Weights and Measures Metrology Laboratory
Test Report

Issued To:

Advanced Scale
13 Delta Drive Unit 6
Londonderry, NH 03053-2372
603-626-0242

Date of Receipt: March 22, 2024
Vermont Test Number: VT24-80
Date of Test: March 25, 2024
Report of Test for Item (Make/Model/Serial Number(s)/#Pieces):

Various/50 lb & 25 lb Cast Field Standards/See Chart/47 - 50 lb, 10 - 25 lb

The mass standards described above have been compared to the standards of the State of Vermont, by NISTIR 6969, SOP 8 (2019), and have been found at time of test, or been adjusted, to meet the maxium permissible errors stated in ASTM E617-23 Standard Specification for Laboratory Weights and Precision Mass Standards. Standards of the State of Vermont are traceable to the SI and National Institute of Standards and Technology (NIST). The Vermont Laboratory is recognized by NIST, under the Laboratory Metrology Program at Mass Echelon III. The mass standards described above were found to have a mass value at the time of test as indicated in the following tabulation. Weights are considered within the MPE when the absolute value of the conventional mass correction plus the uncertainty is less than or equal to the specified MPE. Weights received with a conventional mass outside the MPE show a value in the “before adjustment“ column.

The uncertainties shown are expressed as the sum of the following sources of inaccuracy; (1) Type B, systematic uncertainties relative to the reference standard and procedure used, and (2) Type A, random uncertainties determined by the standard deviation of the measurement process. Type A and Type B uncertainties are combined by the root sum squared method and multiplied by a coverage factor of k (in chart) for an approximate 95 % confidence interval.

Environmental conditions at time of test:
Temperature: 21.6 ºC to 21.7 ºC
Relative Humidity: 47.9 % to 48.5 %
Barometric Pressure: 776.00 mmHg to 776.00 mmHg
Mass Comparator: MT XP64003L
Technician: Scott, Sumner

Nominal & Marking	Conventional Mass Correction Before Adjustment	Conventional Mass Correction As Left	Uncertainty	ASTM Class 6 MPE	Units	*k* Factor
50 lb 200	-3307	233	78	2300	mg	2.01
50 lb 201	-3507	228	78	2300	mg	2.01
50 lb 202	-2657	-337	78	2300	mg	2.01
50 lb 203	-3322	118	78	2300	mg	2.01
50 lb 204		-1837	78	2300	mg	2.01
50 lb 205	-3557	153	78	2300	mg	2.01
50 lb 206		-1352	78	2300	mg	2.01
50 lb 207		-1602	78	2300	mg	2.01
50 lb 208	-2247	-127	78	2300	mg	2.01
50 lb 209		-1962	78	2300	mg	2.01
50 lb 210	-3087	303	78	2300	mg	2.01
50 lb 211		-1447	78	2300	mg	2.01
50 lb 212	-2067	553	78	2300	mg	2.01
50 lb 213		-1927	78	2300	mg	2.01
50 lb 214		-1297	78	2300	mg	2.01
50 lb 215		-1637	78	2300	mg	2.01
50 lb 216	-2117	53	78	2300	mg	2.01
50 lb 217	-3312	13	78	2300	mg	2.01
50 lb 218	-2032	343	78	2300	mg	2.01
50 lb 219	-3612	318	78	2300	mg	2.01
50 lb 400		-587	78	2300	mg	2.01
50 lb 401		208	78	2300	mg	2.01
50 lb 402		873	78	2300	mg	2.01
50 lb 403		-1632	78	2300	mg	2.01
50 lb 404		-652	78	2300	mg	2.01
50 lb 405		-1617	78	2300	mg	2.01
50 lb 406		-1492	78	2300	mg	2.01
50 lb 407		-1722	78	2300	mg	2.01
50 lb 408	-2247	-87	78	2300	mg	2.01
50 lb 409		-1377	78	2300	mg	2.01
50 lb 410	-2267	33	78	2300	mg	2.01
50 lb 411	-2032	-242	78	2300	mg	2.01
50 lb 412		98	78	2300	mg	2.01
50 lb 413		-932	78	2300	mg	2.01
50 lb 414	-2197	-127	78	2300	mg	2.01
50 lb 415		-1337	78	2300	mg	2.01
50 lb 416		-1337	78	2300	mg	2.01
50 lb 417		-967	78	2300	mg	2.01
50 lb 418		-897	78	2300	mg	2.01
50 lb 419		-387	78	2300	mg	2.01
50 lb 420		-1637	78	2300	mg	2.01
50 lb 421		-1422	78	2300	mg	2.01
50 lb 422		-1432	78	2300	mg	2.01
50 lb 423		213	78	2300	mg	2.01
50 lb 424		-1462	78	2300	mg	2.01

50 lb 425		-1712	78	2300	mg	2.01
50 lb 426		-1507	78	2300	mg	2.01
25 lb 460		27	41	1100	mg	2.02
25 lb 461		-583	41	1100	mg	2.02
25 lb 462		-253	41	1100	mg	2.02
25 lb 463		382	41	1100	mg	2.02
25 lb 464		-363	41	1100	mg	2.02
25 lb 465		42	41	1100	mg	2.02
25 lb 466		-328	41	1100	mg	2.02
25 lb 467		-343	41	1100	mg	2.02
25 lb 468		-368	41	1100	mg	2.02
25 lb 469		-538	41	1100	mg	2.02

MPE: Maximum Permissible Error

In addition to meeting ASTM E617-18 Class 6 MPE, all standard also meet NIST Class F Tolerance requirements.

The following weights were adjusted: 200, 201, 202, 203, 205, 208, 210, 212, 216, 217, 218, 219, 408, 410, 411, 414

Calibration Performed at:
163 Admin Drive
Randolph Center, VT 05061

Additional documentation material available on request.

Scott Dolan

Digitally signed by Scott Dolan
Date: 2024.03.25 14:13:29 -04'00'

Scott Dolan/Vermont Agency of Agriculture
Consumer Protection Section/Metrologist
Weights & Measures Specialist

End of Report